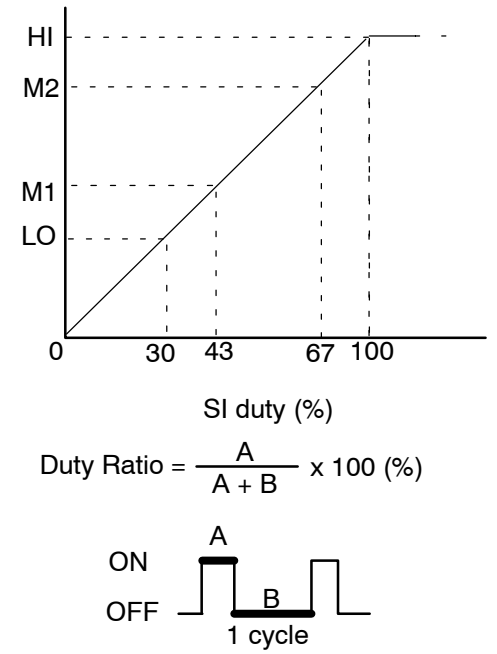
BLOWER MOTOR CIRCUIT



CIRCUIT DESCRIPTION

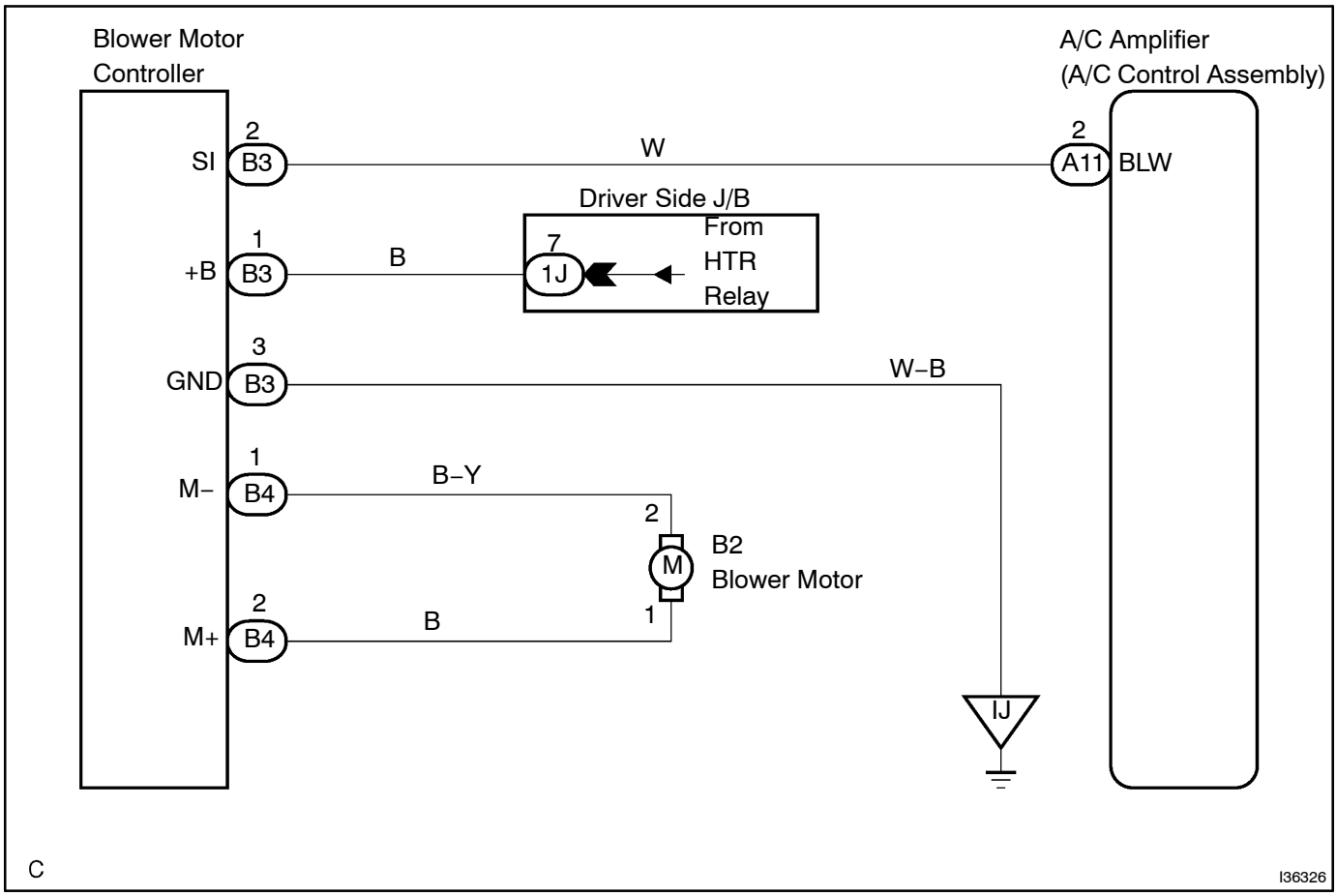
The blower motor is operated by signals from the A/C amplifier assy. Blower motor speed signals are transmitted by changes in the duty ratio.

Duty Ratio

The duty ratio is the ratio of the period of continuity in one cycle. For example, A is the period of continuity in one cycle, and B is the period of non–continuity.

The blower motor controller controls the blower motor speed. The blower motor controller reads the signal from the A/C amplifier and controls rotation and speed.

WIRING DIAGRAM



INSPECTION PROCEDURE

1	PERFORM ACTIVE TEST USING INTELLIGENT TESTER II

(a) Connect the intelligent tester II to DLC3.
(b) Turn the power switch ON and push the intelligent tester II main switch ON.
(c) Select the item below in the ACTIVE TEST and then check that the relay operates.

ACTIVE TEST / AIR CONDITIONER:

Item	Test Details/Display (Range)	Diagnostic Note
Blower Motor	Blower motor / Min.: 0 Max.: 31	–

Result:

OK	A
NG (Blower motor does not operate)	B
NG (Blower motor operate but does not change speed)	C

B → **Go to step 2**

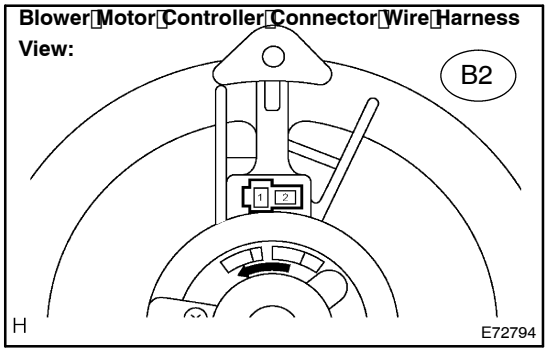
C → **Go to step 6**

A

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE (SEE PAGE 05–1035)

2	INSPECT BLOWER W/FAN MOTOR SUB–ASSY

Blower Motor Controller Connector Wire Harness View:



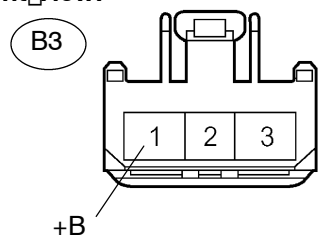
(a) Remove the cooling unit motor sub–assy w/fan.
(b) Connect positive (–) lead connected to terminal 1 of blower motor connector, negative (+) lead to terminal 2.
Standard: Blower motor operates smoothly.

NG → **REPLACE BLOWER W/FAN MOTOR SUB–ASSY**

OK

3	CHECK HARNESS AND CONNECTOR(BLOWER MOTOR CONTROLLER – BATTERY) (SEE PAGE 01–46)

Blower Motor Controller Connector Front View:



(a) Measure the voltage according to the value(s) in the table below.

Standard:

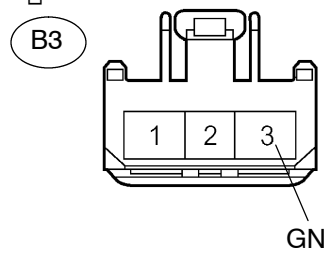
Tester connection	Condition	Specified condition
B3–1 (+B) – Body ground	Always	10 to 14 V

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

4	CHECK HARNESS AND CONNECTOR(BLOWER MOTOR CONTROLLER – BODY GROUND) (SEE PAGE 01–46)

Blower Motor Controller Connector Front View:



(a) Measure the resistance according to the value(s) in the table below.

Standard:

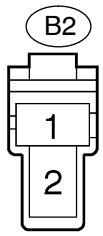
Tester connection	Condition	Specified condition
B3–3 (GND) – Body ground	Always	Below 1 Ω

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

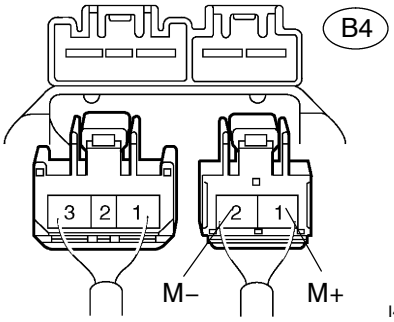
OK

5	CHECK HARNESS AND CONNECTOR(BLOWER MOTOR – BLOWER MOTOR CONTROLLER) (SEE PAGE 01–46)

Blower Motor Connector
Front View:



Blower Motor Controller Connector
Wire Harness View:



(a) Measure the resistance according to the value(s) in the table below.

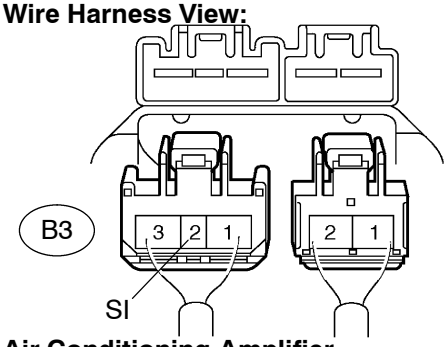
Tester connection	Condition	Specified condition
B4–1 (M+) – B2–2	Always	Below 1 Ω
B4–2 (M–) – B2–1	Always	Below 1 Ω
B4–1 (M+) – Body ground	Always	10 kΩ or higher
B4–2 (M–) – Body ground	Always	10 kΩ or higher

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

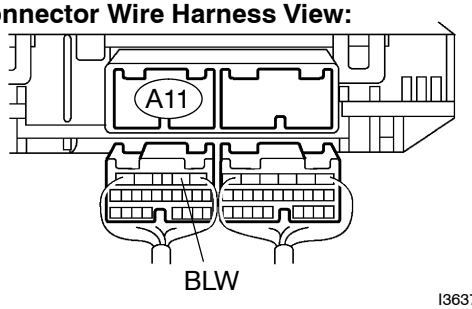
OK

6	CHECK HARNESS AND CONNECTOR(BLOWER MOTOR CONTROLLER – A/C AMPLIFIER) (SEE PAGE 01–46)

Blower Motor Controller Connector
Wire Harness View:



Air Conditioning Amplifier
Connector Wire Harness View:



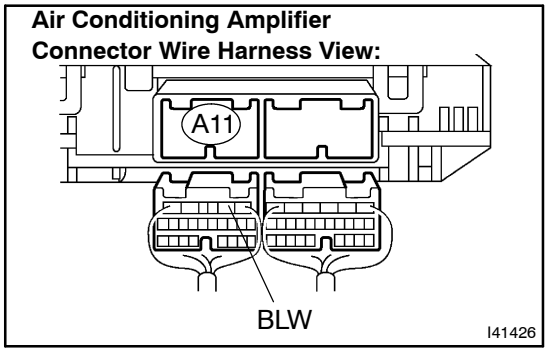
(a) Measure the resistance according to the value(s) in the table below.
Standard:

Tester connection	Condition	Specified condition
A11–2 (BLW) – B3–2 (SI)	Always	Below 1 Ω
A11–2 (BLW) – Body ground	Always	10 kΩ or higher

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

7 INSPECT BLOWER MOTOR CONTROLLER



(a) Measure the voltage according to the value(s) in the table below.

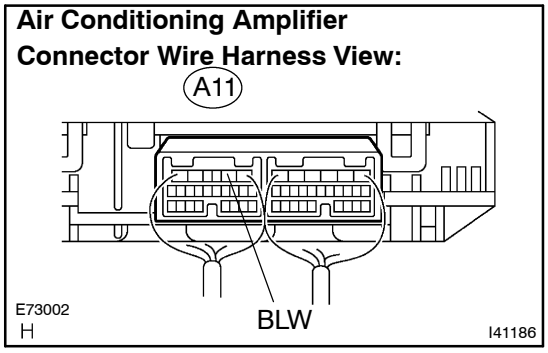
Standard:

Tester connection	Condition	Specified condition
B3–1 (+B) – Body ground	Always	10 to 14 V

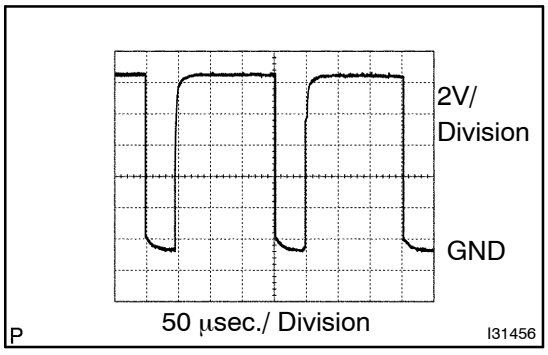
NG → **REPLACE BLOWER MOTOR CONTROLLER**

OK

8 INSPECT AIR CONDITIONING AMPLIFIER(BLW – BODY GROUND)



(a) Remove A/C amplifier with connectors still connected.
(b) Turn the power switch to the ON position.
(c) Blower switch is on (Lo).



(d) Measure the waveform between terminal BLW (A11–2) of A/C amplifier and body ground.

OK:

Waveform operate as shown in the illustration.

HINT:

- The correct waveform is shown in the illustration.
- Waveform cycle varies with the blower level.

NG → **REPLACE AIR CONDITIONING AMPLIFIER (SEE PAGE 55–52)**

OK

REPLACE BLOWER MOTOR CONTROLLER